

Practitioner's Docket: 2003DE428

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

Dirk LEINWEBER, et al.

Serial No.: 10/559,719

Art Unit: 1796

Filed: December 5, 2005

Examiner: Wang, C.C.

For: Alkoxylated, Cross-Linked Polyglycerols And Use Thereof As  
Biodegradable Demulsifier

**DECLARATION UNDER 37 CFR 1.132**

Mail Stop  
Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

I, Stefan Dilsky, state that I am a resident of Oskar-von-Miller-Str. 9, 84503 Altötting, Federal Republic of Germany; that I am a citizen of the Federal Republic of Germany; that I am a chemist having earned the degree of Dr. rer. nat. (corresponds to Ph. D.) from the University of Würzburg, Federal Republic of Germany.

I am acquainted with the subject matter of the above identified Application No. 10/559,719, filed on December 5, 2005, for "Alkoxylated, Cross-Linked Polyglycerols And Use Thereof As Biodegradable Demulsifier".

I have been employed for 3 years in the Research and Development department of Clariant Produkte (Deutschland) GmbH, Gendorf, Germany, where my work has focused on demulsifiers for oilfield applications.

I consider myself qualified, by my knowledge of chemistry, particularly my knowledge of organic chemistry and especially my knowledge of the chemistry of ethercarboxylic acids and by my 3 (three) years of experience in this field, obtained during my employment with Clariant Produkte (Deutschland) GmbH, in the field of oil field chemicals research.

I have made the following experiments and observations with respect to the above subject application. The difference in production processes between Knischka, et al., and the instant invention results in different products. I enclose the result of a comparative molecular weight measurement. We compared the molecular weight distribution of a compound according to the instant invention (Clariant Polygly. ( $n = 24.4$  MB 03/29, see Figure 1) and a compound according to Knischka, et al., (EB 25, having 25 glycerol units, see Figure 2).

It is evident that the molecular weight distribution differs to a great extent when comparing the glycerol condensate of the instant invention and the glycidol adduct of Knischka, et al. The latter shows a rather narrow  $M_w$  distribution. Glycerol polycondensates have a rather broad  $M_w$  distribution. There is a difference in the polyglycerol of the instant invention when compared to Knischka, et al., and this difference is maintained when the polyglycerols are alkoxylated.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Frankfurt am Main,

Date: 01. 03. 2008

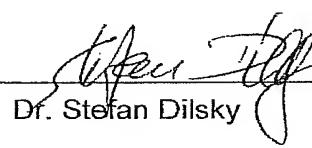
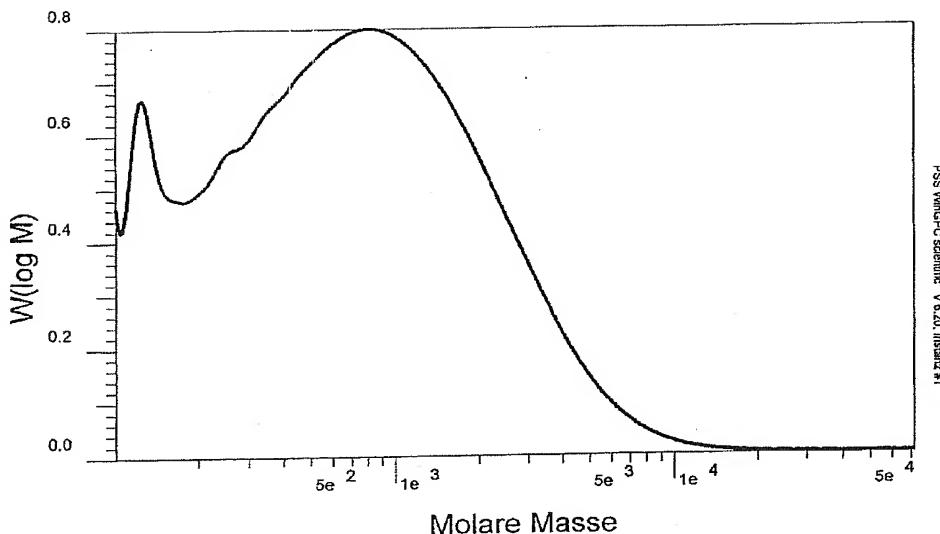
  
Dr. Stefan Dilsky

Figure 1



PSS WinGPC scientifc, V 6.20, Instance #1

|                   |                                    |                  |                 |
|-------------------|------------------------------------|------------------|-----------------|
| Probe :           | Clariant Polygly. (n=24.4) MB03/29 |                  |                 |
| Integration von : | Montag 17.03.03 18:08:21           | 18.937 ml        |                 |
| Integration bis : | Montag 17.03.03 18:20:25           | 31.026 ml        |                 |
| Kalibration :     | DMF101201S.CAL                     | Eluent :         |                 |
| MHK - A (Kal.):   | 6.040E-1                           | MHK - K (Kal.):  | 2.780E-2 ml/g   |
| Int.Stand.-K :    | 32.000 ml                          | Int.Stand.-M :   | 31.949 ml       |
| Pumpe :           | TSP P100                           | Flußrate :       | 1.000 ml/min    |
| Konzentration :   | 6.100 g/l                          | Injectivolumen : | 150.000 $\mu$ l |
| Säule 1 :         | HEMA3000/100/40                    | Temperatur :     | 75.000 C        |
| Detektor 2 :      | Shodex RI-71                       | Versatz :        | 0.000 ml        |
|                   |                                    | Versatz :        | 0.166 ml        |
|                   |                                    | Versatz :        | 0.000 ml        |
|                   |                                    | Messintervall :  | 1.000 sec       |

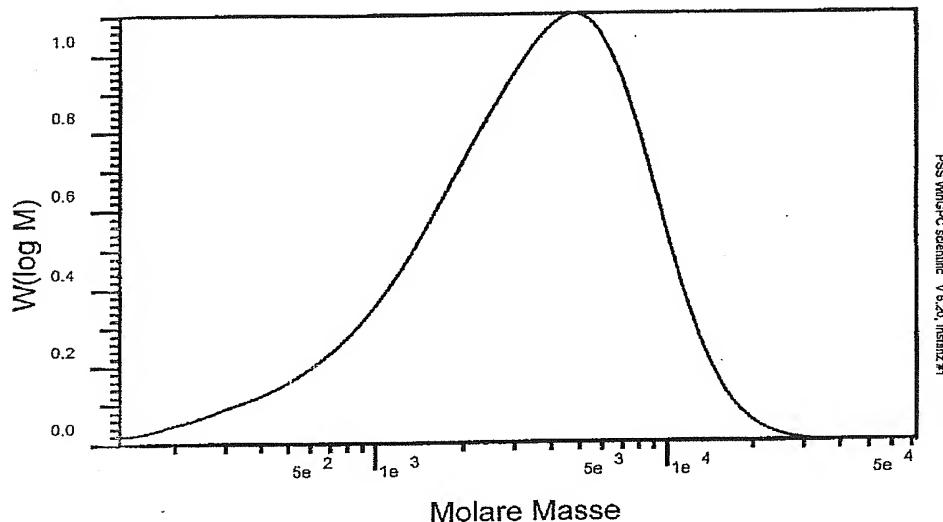
#### Shodex RI-71

|             |          |                    |
|-------------|----------|--------------------|
| Mn :        | 4.1113e2 | g/mol              |
| Mw :        | 1.1683e3 | g/mol              |
| Mz :        | 3.6367e3 | g/mol              |
| Mv :        | 9.3833e2 | g/mol              |
| D :         | 2.8415e0 |                    |
| [ $\eta$ ]: | 1.7352e0 | ml/g               |
| Vp :        | 2.6342e1 | ml                 |
| Mp :        | 8.4167e2 | g/mol              |
| FI :        | 3.809e-1 | ml <sup>2</sup> /V |
| < 100       | 0.00     |                    |
| w% :        | 100.00   |                    |
| > 71970     | 0.00     |                    |

Projekt : U:\EMILIE\Experimente\Analysis\GPC\dmf.LDA  
 Datum : Donnerstag 27.03.03 17:58:04

Kostenstelle :  
 Zeichen :

Figure 2



|                    |                            |                     |               |
|--------------------|----------------------------|---------------------|---------------|
| Probe :            | EB 25                      |                     |               |
| Integration von :  | Dienstag 18.02.03 14:13:56 | 18.921 ml           |               |
| Integration bis :  | Dienstag 18.02.03 14:25:11 | 30.180 ml           |               |
| Kalibration :      | DMF101201S.CAL             | Eluent :            |               |
| MHK - A (Kal.):    | 6.040E-1                   | MHK - K (Kal.):     | DMF mit LiBr  |
| Int.Stand.-K :     | 32.000 ml                  | Int.Stand.-M :      | 2.780E-2 ml/g |
| Pumpe :            | TSP P100                   | Flußrate :          | 32.048 ml     |
| Konzentration :    | 5.215 g/l                  | Injektionsvolumen : | 1.000 ml/min  |
| Säule 1 :          | HEMA3000/100/40            | Temperatur :        | 150.000 ul    |
| <u>Detektor 2:</u> | Shodex RI-71               | Versatz :           | 75.000 C      |
|                    |                            | Versatz :           | 0.000 ml      |
|                    |                            | Versatz :           | 0.166 ml      |
|                    |                            | Messintervall :     | 0.000 ml      |
|                    |                            |                     | 1.000 sec     |

Shodex RI-71

|               |          |       |
|---------------|----------|-------|
| <u>Mn</u> :   | 1.8870e3 | g/mol |
| <u>Mw</u> :   | 4.4430e3 | g/mol |
| <u>Mz</u> :   | 7.3476e3 | g/mol |
| <u>Mv</u> :   | 3.9292e3 | g/mol |
| <u>D</u> :    | 2.3546e0 |       |
| [ <u>n</u> ]: | 4.1210e0 | ml/g  |
| <u>Vp</u> :   | 2.3214e1 | ml    |
| <u>Mp</u> :   | 4.8980e3 | g/mol |
| <u>FI</u> :   | 3.548e-1 | ml*V  |
| < 130         | 0.00     |       |
| w% :          | 100.00   |       |
| > 72770       | 0.00     |       |